Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Implementation of the NET 911	)	WC Docket No. 08-171
Improvement Act of 2008	)	
	)	

COMMENTS OF COMCAST CORPORATION

Comcast Corporation ("Comcast") and its affiliates hereby submit these comments in response to the Notice of Proposed Rulemaking ("*Notice*") released by the Federal Communications Commission in the above-captioned proceeding.[1]

I. INTRODUCTION AND SUMMARY

As Congress and the FCC repeatedly have recognized, it is critically important that consumers have access to 911 and E911 services, regardless of the type of voice service they choose. In 2005, the Commission adopted rules requiring providers of interconnected Voice over Internet Protocol ("VoIP") services to provide 911 and E911 services to their customers.[2] In 2008, Congress codified this requirement in the New and Emerging Technologies 911 Improvement Act of 2008 ("NET 911 Act").[3] In the NET 911 Act, Congress also mandated

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1 *Implementation of the NET 911 Improvement Act of 2008*, WC Docket No. 08-171, Notice of Proposed Rulemaking, FCC 08-195 (rel. Aug. 25, 2008) ("*Notice*").

2 *IP-Enabled Services; E911 Requirements for IP-Enabled Service Providers*, WC Docket Nos. 04-36 & 05-196, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245, ¶ 1 (2005) ("*VoIP 911 Order*"), *aff'd sub nom. Nuvio Corp. v. FCC*, 473 F.3d 302 (D.C. Cir. 2006).

3 New and Emerging Technologies 911 Improvement Act of 2008, Pub. L. No. 110-283, 122 Stat. 2620 (amending Wireless Communications and Public Safety Act of 1999, Pub. L. No. 106-81, 113 Stat. 1286).

that IP-enabled voice service providers have access to the capabilities needed to provide 911 and E911 service. Congress required the Commission by October 21, 2008, to issue regulations to ensure that providers of IP-enabled voice services have access to these capabilities at the same rates, terms and conditions as commercial mobile service ("CMS") providers.[4] Pursuant to that mandate, the FCC should take the following steps:

- Adopt a general rule that requires all entities that own or control capabilities used for 911 and E911 service to give IP-enabled voice service providers access to those capabilities;
- Define a non-exhaustive list of capabilities required to provide 911 and E911 service; and
- Require that access to all capabilities necessary to provide 911 and E911 service be made available at non-discriminatory, cost-based rates.

Adopting these regulations is a necessary and logical next step in Congress' and the Commission's "longstanding and continuing commitment to a nationwide communications system that promotes the safety and welfare of all Americans."[5]

II. DISCUSSION

A. General Rule Mandating Access to Necessary Capabilities

Fulfillment of the mandate of the NET 911 Act requires FCC rules that will provide for access to an evolving set of capabilities. As explained below, IP-enabled voice service providers today require access to capabilities that allow them to communicate with existing, non-IP emergency networks. In addition, the NET 911 Act requires a national plan for migrating to an IP-based emergency network, a network that will of necessity require IP-enabled voice providers to have access to a different set of capabilities than they require

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4 *Notice* ¶ 2.

5 *VoIP 911 Order* ¶ 5.

today. Comcast, along with other IP-enabled voice service providers, is participating in the development of these next generation emergency networks, including identification of the capabilities that will be required in the future for connection to these networks.[6] Comcast recommends adoption of a general, flexible rule requiring all entities that own or control capabilities needed for 911 and E911 services to provide IP-enabled voice service providers with access to those facilities. In addition, the FCC should adopt a non-exhaustive list of required capabilities, which can be supplemented as the emergency networks evolve.

Today, Comcast uses existing fixed wireline technology, including the incumbent LEC's selective router, to provide 911 and E911 services for its customers by updating the appropriate Automatic Location Identification ("ALI") databases with static address information from the Master Street Address Guide ("MSAG"). In the future, however, emergency calls from IP-enabled voice service providers will be handled quite differently. The next generation IP-enabled emergency networks may allow service providers to route an emergency call directly to an IP-enabled PSAP using an IP address, with the customer location information embedded in the IP message.[7] Once the new IP-enabled network is fully deployed, Comcast may no longer require access to the LEC's selective router. Instead,

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[6] For example, earlier this year, Comcast participated in a panel discussing next generation 911 capabilities during the "Summit on 911 Call Center Operations and Next Generation Technologies" hosted by the Public Safety and Homeland Security Bureau. *See* Public Notice, "Public Safety and Homeland Security Bureau to Host Summit on 911 Call Center Operations and Next Generation Technologies," 2008 FCC LEXIS 752 (rel. Jan. 23, 2008).

[7] In recognition of the expanded opportunities presented by IP networks, including use of text, data, images and video in handling emergency calls, Congress mandated the development of a national plan for migrating to a national IP-enabled emergency network. 47 U.S.C. § 942(d). The U.S. Department of Transportation also has been working on a Next Generation 911 initiative. *See* U.S. Department of Transportation, "Next Generation 9-1-1," *available at*: <http://www.its.dot.gov/ng911/>.

Comcast will require access to, among other capabilities, servers that perform emergency call routing and location validation functions.

Because the technologies used to provide emergency services are in a state of flux, granting IP-enabled voice service providers access to a static set of capabilities plainly would not satisfy the Congressional mandate. Accordingly, rather than adopt a static list of capabilities, the FCC must ensure that IP-enabled voice service providers are able to obtain access quickly and flexibly to additional or modified capabilities necessary to provide 911 or E911 service.

B. Non-exhaustive List of Required Capabilities

To minimize delay and to provide some certainty regarding the rights of IP-enabled voice service providers, the FCC should adopt a non-exhaustive list of capabilities currently required to provide 911 and E911 service. This list should include those capabilities required today by CMS providers, as well as any capabilities required by IP-enabled voice service providers, but not required by CMS providers.[8] At a minimum, the non-exhaustive list should include the following capabilities:

- Real-time access to update the ALI database through a V-E2 interface (or similar-type link) so that the PSAP can query a VoIP Positioning Center ("VPC") to obtain customer information;

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[8] Adoption of a non-exhaustive list of these capabilities is consistent with Congress' direction that "[i]n promulgating regulations, the Commission should therefore consider equipment; interfaces, such as PSAP interface and integration capabilities; networks, such as Emergency Service Numbers, Emergency Service Query Keys, and Emergency Service Routing Numbers; selective routers; trunklines; non-dialable pseudo automatic number identification numbers (p-ANIs); facilities, including access to voice and data communication ports; databases; and other components only to the extent that any of these are needed to support the seamless transmission, delivery, and completion of 911 and E–911 calls and associated E–911 information." H.R. Rep. No. 110-442 at 14 (2007).

- Access to the ALI and the ability to either update ANI-to-MSAG locations for static ALI support or to update ESQK (p-ANI-to-ESN) "shell records" to support call routing;[9]
- Interconnection to the selective router;
- Access to ESQK pools (pseudo ANI telephone number blocks);
- Access to up-to-date MSAG records; access must include valid Emergency Service Numbers ("ESNs") for each MSAG range and escalation points to resolve both MSAG range issues and postal-to-MSAG translation issues;
- Access to translations to convert ESNs to PSAPs;
- Access to the requirements and ability to test 911 and E911 service by, among other things, placing test calls; and
- Ability to enter into 911 agreements with PSAPs, counties or other state authorities that have a role in the provision of emergency services (if applicable).

C. Access to Capabilities Not on the List

As discussed above, as networks evolve, IP-enabled voice service providers will require access to capabilities not yet on the non-exhaustive list. The FCC should adopt a general rule stating that, if an IP-enabled voice provider submits a request for access to a capability that a network can provide and is needed to provide 911 or E911 service, but is not on the list, the entity with ownership or control over that capability must make it available. If the entity wishes to ask the FCC to exclude the capability from the list of required capabilities, the entity may petition the FCC for expedited consideration of that request. While the petition is pending, however, the entity must provide the capability to the requesting IP-enabled service provider. In addition, the FCC should adopt a mechanism that provides for expedited resolution of any requests to supplement the list, as additional capabilities become necessary in the future.

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[9] "Shell records" are records that contain an ESQK (or pseudo-ANI) telephone number and ESN information, and enable a selective router to route an emergency call to the serving PSAP.

D. Ownership, Control, and Right of Access

The NET 911 Act mandates that the FCC ensure that IP-enabled voice service providers have the ability to exercise their rights to obtain access to those capabilities necessary to provide 911 and E911, regardless of who controls or owns those capabilities. Section 615a-1(c)(1)(A) directs the FCC to issue implementing "regulations that ensure that IP-enabled voice service providers have the ability to exercise their rights" to access the capabilities necessary to provide 911 and E911.[10]

In enacting the NET 911 legislation, Congress granted the FCC authority to mandate and enforce access to the required capabilities, regardless of ownership or control:

> An IP-enabled voice service provider that seeks capabilities to provide 9-1-1 and enhanced 9-1-1 service from an entity with ownership or control over such capabilities, to comply with its obligations under subsection (a), shall, for the exclusive purpose of complying with such obligations, have a right of access to such capabilities . . . .[11]

Although many of the capabilities at issue are controlled or owned exclusively by incumbent LECs, the Act also requires compliance by other entities that own or control capabilities that are part of the 911-specific infrastructure. For example, IP-enabled voice service providers will need to work with states and localities to obtain up-to-date access to the MSAG, and to coordinate testing of 911 solutions. If customers of IP-enabled voice services are to have full access to 911/E911, as mandated by Congress, the FCC must be able to enforce access to the necessary capabilities whether controlled by incumbent LECs, states, localities, or other entities.[12] The use of the word "entity" in section 615a-1(b) demonstrates that Congress knew

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10 47 U.S.C. § 615a-1(c)(1)(A).

11 47 U.S.C. § 615a-1(b).

12 Congress' directive is limited with respect to the types of capabilities involved, which are PSAP-facing, and specifically concerned with 911 and E911 services.

that the universe of owners or controllers of capabilities at issue was broader than incumbent LECs or even carriers. This reading is confirmed by the legislative history, in which Congress explicitly stated that "[t]he term 'an[] entity' should be broadly construed because critical components of the 911 infrastructure may reside with an incumbent carrier, a PSAP, or some other entity."[13] By directing the FCC in section 615a-1(c) to issue regulations to ensure that IP-enabled voice service providers have the ability to exercise these rights, Congress clearly authorized the FCC to adopt rules governing states, localities, and other entities that control or own the necessary capabilities.[14]

E. Access to Capabilities at Non-discriminatory, Cost-based Rates, and on Non-discriminatory Terms and Conditions

The NET 911 Act mandates that IP-enabled voice providers must be provided access to the required capabilities necessary to provide 911/E911 service at the same rates, and on the same terms and conditions, as such capabilities are provided to wireless carriers.[15] Ensuring compliance with this non-discrimination obligation requires IP-enabled voice service providers to have the ability to determine the rates, terms, and conditions available to CMS providers. Therefore, the FCC should adopt a method for ensuring the necessary transparency. Specifically, incumbent LECs and other carriers that own or control necessary capabilities should be required to publish all rates, terms and conditions, *e.g.*, on a website, and make them available to any requesting IP-enabled service provider. States, localities and

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13 H.R. Rep. No. 110-442 at 14 (2007).

14 Granting federal agencies authority over state and local entities in the context of emergency services is not unusual. For example, Congress has granted the Department of Justice authority over PSAPs with respect to their role in responding to 911 and E911 calls. *See, e.g.*, 28 C.F.R. § 35.162 (requiring PSAPs to provide direct access to emergency services to individuals who use TDDs).

15 47 U.S.C. § 615a-1(c)(1)(C).

other entities owning or controlling necessary capabilities similarly must publish and make available upon request their rates, terms and conditions.

The NPRM also seeks comment on a pricing standard for capabilities. As the FCC has recognized in a variety of contexts, rate regulation generally seeks to replicate the rates that a competitive market would produce.[16] Basic economics teaches that competitive markets generally drive prices toward long-run incremental costs.[17] Calculating long-run incremental cost for many of the necessary 911 and E911 capabilities, however, is likely to be extremely resource-intensive and time-consuming. For that reason, the FCC should instead obtain a reasonable proxy of the long-run incremental costs of the particular feature or function. For example, rates for interconnection trunks used for 911 and E911 should be set equal to the cost-based price for local interconnection trunks used for non-911 services. Requiring cost-based pricing, and using existing proxy rates, where available, will help achieve the paramount objective of the NET 911 Act, which is the promotion of public safety.

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[16] *See, e.g., Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499, ¶ 620 (1996) (adopting a long-run incremental pricing standard based in part upon the reasoning that "[i]n dynamic competitive markets, firms take action based . . . on the relationship between market-determined prices and forward-looking economic costs. If market prices exceed forward-looking economic costs, new competitors will enter the market. If their forward-looking economic costs exceed market prices, new competitors will not enter the market and existing competitors may decide to leave.").

[17] *See, e.g., id.* ¶ 675 ("In competitive markets, the price of a good or service will tend towards its long-run incremental cost.").

III. CONCLUSION

For the foregoing reasons, the Commission should take the steps outlined above to ensure that providers of IP-enabled voice services have access to the capabilities needed to provide 911 and E911 service.

Respectfully submitted,

/s/ Kathryn A. Zachem

Ruth Milkman
A. Renée Callahan
LAWLER, METZGER, MILKMAN & KEENEY, LLC
2001 K Street, NW
Suite 802
Washington, D.C. 20006

Attorneys for Comcast Corporation

Kathryn A. Zachem
Mary P. McManus
COMCAST CORPORATION
2001 Pennsylvania Avenue, NW
Suite 500
Washington, D.C. 20006
(202) 379-7134
(202) 379-7141

Brian A. Rankin
COMCAST CABLE COMMUNICATIONS, LLC
One Comcast Center, 50th Floor
Philadelphia, PA 19103

September 9, 2008

Certificate of Service

I, Ruth E. Holder, hereby certify that on this 9th day of September, 2008, I caused true and correct copies of the foregoing Comments of Comcast Corporation to be mailed by electronic mail to:

Competition Policy Division
Wireline Competition Bureau
Federal Communications Commission
cpdcopies@fcc.gov

and

Best Copy and Printing, Inc.
fcc@bcpiweb.com.

In addition, one copy of each pleading was mailed by electronic mail to each of the following:

Tim Stelzig
Competition Policy Division
Wireline Competition Bureau
Federal Communications Commission
tim.stelzig@fcc.gov

and

Matt Warner
Competition Policy Division
Wireline Competition Bureau
Federal Communications Commission
matthew.warner@fcc.gov

/s/ Ruth E. Holder
Ruth E. Holder